



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
ONE CONGRESS STREET SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

Marcia Sherman DEP
617-556-1198

March 8, 2006

Glenn Haas, Director
Division of Watershed Management
Bureau of Resource Protection
Department of Environmental Protection
One Winter Street
Boston, Massachusetts 02108

Dear Mr. Haas:

The Environmental Protection Agency (EPA) has reviewed the proposed revisions to the Massachusetts Surface Water Quality Standards (WQS) that were published by the Department of Environmental Protection (DEP) on December 2, 2005. Based on this review, we are providing comments that are intended to assist DEP in finalizing WQS revisions consistent with the federal Clean Water Act (CWA) and the federal water quality standards regulations.

Many of the suggestions that EPA has previously made for revision to the WQS are reflected in the proposed revisions, and I thank DEP for its attention to those issues. I would like to compliment DEP on several of its proposed revisions, such as generally updating the State's numeric water quality criteria for toxic pollutants, including a level of protection under antidegradation equivalent to the federal Outstanding National Resource Water provision, and including the indicators recommended in EPA's 1986 bacteria criteria recommendations for all inland and coastal and marine waters designated for primary contact recreation.

The following comments are presented in two categories, '1) areas where the Region has identified significant concerns, and 2) areas where we have suggested edits or where additional information is necessary for the Region to determine if the proposed revisions are consistent with the federal CWA.

Most Significant Issues:

- The Massachusetts Water Quality Standards (standards) need to apply to all waters of the U.S. We continue to be troubled by DEP's failure to extend WQS coverage to all vernal pools that are subject to federal jurisdiction by defining vernal pools as being only those pools that are certified by the Division of Fisheries and Wildlife. DEP's definition means that vernal pools that are still subject to federal jurisdiction post-SWANCC¹ are not protected if they are not certified. DEP

¹Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001) (SWANCC).

has not offered any explanation for failing to make the changes we had requested. If there is another basis for asserting the applicability of WQS to noncertified vernal pools, we would be interested in understanding that basis. If DEP's failure to make the change stems from a concern that it does not want all vernal pools to become outstanding resource waters, we suggest that the regulations be changed to provide that the WQS apply to all federally jurisdictional vernal pools (regardless of certification status), and that only certified vernal pools are outstanding resource waters. We also continue to recommend that explicit language be added indicating that the standards as a whole apply to all waters of the U.S.

Not
NIR

- Section 4.04 contains several revisions that are consistent with our past comments. However, the language in § 4.04(2) continues to suggest that high quality water protection only applies to new or increased discharges. As a part of water quality standards, antidegradation requirements should apply to all waters of the U.S. that are within Massachusetts and to any activity that could lower water quality to the extent that there are applicable regulatory programs that require compliance with water quality standards. For example, antidegradation should be an aspect of the analysis of the effects of a § 316(b) intake structure. The concern about the focus on discharges in general is reinforced by the revised § 4.04(6) "The Department applies its Antidegradation Implementation Procedures to discharges subject to these Standard." We continue to recommend that language be added to the antidegradation provisions to clarify their applicability. See also our comment below related to the definition of "discharge."

Not
NIR

- The Authorization provisions at § 4.04(5)(b) omit for new or increased discharges to Outstanding Resource Waters at § 4.04(3) the requirement to demonstrate that degradation that would occur is necessary to accommodate important economic or social development. This seems to be based on a presumption that any degradation that could occur as a result of discharges that are allowed at § 4.04(3) is necessary. This presumption is not appropriate without at least a case specific determination that the degradation is insignificant. We suggest that the authorization process for new or increased discharges to Outstanding Resource Waters be revised to be the same as that for waters covered by 4.04(5)(a). DEP could retain the narrow extent of discharges that it would consider for authorization for Outstanding Resource Waters under 4.04(5)(a).

- We have expressed concern that in the current Massachusetts water quality standards at § 4.05(3)(a), public water supply might be interpreted as the only actual designated use. We commented that the Class A language needs to be revised to clearly include in the designated uses, the CWA section 101(a)(2) goal uses of protection and propagation of fish, shellfish, and wildlife, and of recreation in and on the water (or the state must provide UAAs that document that these uses are not attainable for each water classified as A).

While the language is proposed for revision, it remains unclear as to whether DEP considers "excellent habitat for fish, other aquatic life and wildlife..." and "primary and secondary contact recreation" to be designated uses along with public water supply. Further, the proposed language "except where inconsistent with activities required for compliance with the federal or state Safe

Drinking Water Act" inappropriately modifies the aquatic life and wildlife statements. The implication that the federal Safe Drinking Water Act (SDWA) authorizes activities inconsistent with the federal CWA in the course of providing safe and adequate drinking water supply is unfounded.

This issue is also important because DEP is proposing to reclassify a group of waters that are currently Class B, which clearly includes the CWA section 101(a)(2) "goal uses" as designated uses, to Class A. To the extent that the CWA section 101(a)(2) "goal uses" are not unqualified designated uses in Class A, such reclassifications would be considered downgrades requiring the support of use attainability analysis (UAA).

We continue to request that the Class A language be revised to clearly include in the designated uses, the CWA section 101(a)(2) goal uses of protection and propagation of fish, shellfish, and wildlife, and of recreation. This could be accomplished by using a format consistent with how the Class B designated uses are stated. Such as, "These waters are designated as excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth, and other critical functions, and for primary and secondary contact recreation (even if access for recreation is restricted)."

- Section 4.05, Bacteria Criteria For Primary Contact Recreation: EPA is pleased that DEP is proposing to adopt criteria utilizing the indicator bacteria recommended by EPA in Ambient Water Quality Criteria for Bacteria – 1986, EPA 440/5-84-002, January 1986, for all freshwater and coastal and marine water with primary contact recreation as a designated use. As you are aware, EPA has recommended that states replace fecal coliform with EPA's 1986 recommendations and, in November of 2004, EPA promulgated those criteria for coastal primary contact recreation waters for certain states and territories, including MA (Water Quality Standards for Coastal and Great Lakes Recreation Waters, 69 FR 67217, November 16, 2004).

The Region is concerned, however, that DEP is not proposing to adopt single sample maximum criteria for waters that are not recognized by the State as official bathing beaches and for waters recognized as official bathing beaches during the "non bathing season" (for Class A, B, SA, and SB). Because the risk of illness to a swimmer on any given day is associated with the exposure that occurs on that day, we are concerned with reliance solely on the geometric mean criterion. Also, the geometric mean criteria as proposed are defined as being based on a minimum of five samples. We seek clarification as to how DEP intends to implement the geometric mean criterion in a case where the minimum sample requirement is not satisfied. This is particularly of concern in absence of a single sample maximum criterion.

The Region is still coordinating with EPA headquarters to determine if there are any concerns that DEP would need to address before EPA could remove MA from the federal rule for coastal primary contact recreation waters.

- Section 4.06(1)(d)(11): As EPA has previously suggested, it would be appropriate for DEP to clarify in the WQS the criteria that apply and the expected (goal) use attainment for each B(CSO) and SB(CSO) segment. We suggest the following language: "For B(CSO) or SB(CSO) segments, impact on uses and exceedences of criteria for Class B or Class SB are limited to those

identified in the approved CSO facilities plan/UAA as remaining after the implementation of control measures." Such a statement would provide readers of the water quality standards with a reference to what B(CSO) or SB(CSO) means for a given water. Alternatively, DEP could include specific information in the text of the WQS for each B(CSO) and SB(CSO) segment.

- EPA is aware that the Rhode Island Department of Environmental Management (DEM) has requested that DEP reclassify Shad Factory Reservoir, Anawan Reservoir, Swansea Reservoir, Kickemuit River, Heath Brook, and other tributaries of the Kickemuit Reservoir to Class A because these waters are utilized as sources of public water supply in Rhode Island. EPA encourages DEP to strongly consider ways to recognize these waters as public supply sources in the WQS, and to coordinate with DEM to ensure that these waters receive the protection necessary to ensure their continued viability as a regional water supply. We would like to have a meeting with DEP and DEM to discuss mutual watershed protection measures that might be feasible for both states.

Additional Issues:

- The definition of "Lakes and Ponds" at § 4.02 is proposed for revision. While we do not believe this is a concern, we request clarification as to the purpose of this proposed revision.

- We recognize that the definition of "discharge" has not changed. However, in light of recent litigation before the Supreme Court in the *S.D. Warren* case, we suggest that "discharge" be defined to *include, but not be limited to* "discharge of pollutants," to avoid an argument over DEP's authority to issue § 401 certifications for activities such as dam relicensing or navigational dredging.

- Section 4.03(3) Hydrologic Conditions: As we have previously commented, many of EPA's 304(a) criteria which DEP has adopted are expressed with a duration and frequency of acceptable exceedence of the magnitude, but the criteria (i.e., the magnitude, duration, and frequency) are not to be exceeded. We note that DEP has proposed a revision that addresses this comment, but has not made explicit reference to use of the duration and frequency components that are part of EPA's criteria guidance. Where EPA's 304(a) criteria are adopted without an explicit statement of the appropriate averaging periods, we expect that the duration and frequency components that are part of EPA's criteria guidance will be used, unless alternate averaging periods are justified and adopted into the WQS.

- Consistent with our comment, the high quality water protection language at § 4.04(2) is revised to provide protection wherever water quality is better than necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, rather than the designation of certain waters for protection. However, § 4.06(1)(d)3 continues to reference waters designated for protection of high quality water. If DEP still intends to highlight certain waters of high quality, we suggest the addition of language at § 4.06(1)(d)4 clarifying that high quality water protection in accordance with § 4.04(2) is not limited to the denoted waters.

- To be consistent with 40 CFR § 131.12(2), 314 CMR § 4.04(2) should be revised to include "Further, the Division will assure that there shall be achieved the highest statutory and regulatory

requirements for all new and existing point sources and all cost effective and reasonable best management practices for nonpoint source control." This provision should be part of the State's water quality standards regulation, in addition to the implementation procedures.

- We continue to have concerns about §§ 4.04(5)(d) and (e), which provide exemptions from the requirements of §§ 4.04(5)(a) through (c) for discharges necessary to abate an imminent hazard, and for discharges required as part of an enforcement order issued by DEP in order to improve water quality, respectively. First, it is unclear whether existing uses would still have to be maintained and protected, as required by federal regulations. Second, § 4.04(5)(d) is not consistent with the approach taken in EPA's water quality regulations for the Great Lakes System, because it fails to require, in lieu of the analysis required by §§ 4.04(5)(a) through (c), a demonstration that the action uses the most cost effective pollution prevention and treatment techniques available and minimizes the necessary lowering of water quality. We request that such a demonstration requirement be added to the exemption. Third, regarding § 4.04(5)(e), it is not clear whether it only applies to a new or increased discharge into the same water body segment which is the subject of the effort to improve water quality or prevent water quality from deteriorating. If so, then this provision appears to reflect a reasonable "upfront" determination that any such discharge, by its nature, would not result in degradation of the receiving water. However, if the provision would also exempt discharges that would go to a different waterbody, then this provision would not be consistent with federal regulations, and the analysis required by §§ 4.04(5)(a) through (c) should be conducted before such a discharge could occur in high quality waters.

- We understand that it is DEP's intent to revise its antidegradation implementation procedures upon completion and adoption of revisions to the antidegradation regulations. As you are aware, EPA has provided DEP with suggestions for revision of the antidegradation implementation procedures, and we look forward to working with DEP to complete revision of the procedures. Revisions to antidegradation implementation procedures constitute standards revisions, and, as such, are subject to the public notice/participation requirements as well as EPA review and approval.

- § 4.05(2): We seek clarification as to what "or otherwise" means with regard to mechanisms for the development of site-specific criteria, and clarification as to the meaning of the two statements about site-specific criteria "superseding" other criteria in the WQS. It is acceptable for DEP to develop site-specific criteria that are protective of existing and designated uses, be it in conjunction with a TMDL or at another time. Regardless of the mechanism for development, site-specific criteria that are to become WQS need to be public noticed as such and adopted consistent with federal procedures for establishing new or revised WQS. This should be done whether a site-specific criterion is less stringent or more stringent than the otherwise applicable criterion that is to be replaced. Also, while it is appropriate for a sufficiently protective site-specific criterion for copper, for example, to supersede the statewide default criterion for copper, it would not be appropriate for a site-specific nutrient criterion, developed to address non-attainment of a dissolved oxygen (DO) criterion, to supersede that DO criterion.

Finally, it is unclear what effect, if any, these changes have on DEP's (or EPA's) ability, in the context of a permit decision, to impose a numeric effluent limitation as an interpretation of a

narrative criterion. We assume that this would not necessarily constitute the adoption of a site specific criterion subject to the water quality standards revision process.

- It is important that in proposing to revise the dissolved oxygen criteria language at § 4.05, DEP is retaining provisions requiring maintenance of natural seasonal and daily variations that are necessary to protect existing and designated uses. This provision would be strengthened if DEP were to include numeric criteria consistent with EPA's § 304(a) criteria guidance to ensure protection of early life stages of fresh water coldwater species.

- Under coordination of the MA Executive Office of Environmental Affairs, DEP, the MA Division of Fisheries and Wildlife, and EPA have been engaged in the discussion of potential revisions to the MA WQS intended to improve the protection of coldwater fishery resources. As a result, the following comments reflect those discussions as well as the revisions DEP proposed on December 2, 2005.

- a) It is important that the definition of Cold Water Fishery at § 4.02 continue to be written in terms of waters being capable of supporting cold water aquatic life. It would not be appropriate to revise the definition such that it is restricted to waters known to support such communities. There may be times when the goal of cold water fishery is appropriate, but a cold water fishery does not exist, and there may be cases where the cold water component of habitat is present, but the cold water community is absent for reasons such as chemical pollution that can be remedied.
- b) Similar to the language suggested by the DFW in its December 22, 2005 comments, EPA suggests the following for the beginning of § 4.05(3)(a)2.a and § 405(3)(b)2.a, for Class A and Class B, respectively: "Shall not exceed 68 degrees F (20 degrees C) in cold water fisheries except where naturally occurring. Where a reproducing cold water aquatic community exists at a naturally occurring temperature exceeding 68 degrees F (20 degrees C), that higher temperature shall not be exceeded." In its suggested language, DFW provided that the 68 degrees F (20 degrees C) criterion be "based on a mean of daily maximum temperatures over a 30 day period." EPA believes that further discussion and documentation is necessary to establish if it is appropriate to revise the criterion in terms of a 30 day average. We note that EPA's temperature criteria guidance lists 66 degrees F as a 7 day average for brook trout growth.
- c) The provisions restricting the maximum allowable rise in temperature at § 4.05(3)(a)2.a and § 405(3)(b)2.a should be written in terms of all activities, rather than discharges only.
- d) EPA supports the language at § 4.05(3)(a)2.b and § 4.05(3)(b)2.b, requiring that natural seasonal and daily variations necessary to protect uses be maintained. Maintaining such variations should not be limited to the cases where a cold water community exists because there may be times when cold water fishery is designated, but not currently existing.
- e) EPA supports the proposed revisions at § 4.06(1)(d)(7) which clarify that DEP considers cold water communities to be protected as existing uses where they exist absent the water being designated as cold water.
- f) In its comment letter of December 22, 2005, the DFW requested that DEP designate specific waters as cold water. EPA encourages the DFW and DEP to continue their coordination to ensure that waters are designated cold water where appropriate.

- We request that the provision proposed for Classes B, C, SA, SB, and SC concerning cooling water intake structures and § 316(b) of the federal CWA, be further revised to include explicit reference to protection of existing uses, in addition to designated uses. We also urge DEP to include the proposed provision in the criteria for Class A waters to ensure that DEP has adequate authority to require intake structures affecting those waters to comply with water quality standards, unless it is clear that such intake structures are prohibited in Class A waters (including tributaries) and that any existing intake structures would be required to be removed from any waterbody that may be reclassified to Class A.
- Section 4.05(5)(c): EPA supports DEP's proposal to adopt a narrative criterion for nutrients that is protective of existing and designated uses. We seek clarification from DEP that the statements concerning technology requirements (HBPT and BAT for existing point sources and best management practices for nonpoint sources) are additional requirements and do not modify or interpret what is necessary to meet the water quality based narrative. We also seek clarification of what is intended with respect to new point source discharges. With regard to the reference to "site-specific criteria contained in a TMDL or otherwise established by the Department pursuant to these Standards," please see our comment on section 4.05(2).
- Section 4.05 (5)(e): The Toxic Pollutants language has been revised to include an explicit reference to EPA's § 304(a) criteria as summarized in "National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047, November 2002." EPA appreciates DEP's effort to maintain current criteria in its WQS. Subsequent to the November 2002 summary, EPA published final updates to human health criteria for 15 chemicals (68 FR 75507, December 31, 2003) and final freshwater and saltwater aquatic life criteria for tributyltin (69 FR 362, January 5, 2004, EPA 822-R-03-031). We suggest that DEP take this opportunity to include these updated criteria as well by referencing the 2006 summary table that is available on EPA's website.
- Section 4.05(5)(e)3.a: It would be appropriate to revise this provision to include wildlife, i.e., "...to assure that pollutants do not persist in the environment or accumulate in organisms to levels that: are toxic to humans or aquatic life or wildlife..." to be consistent with federal law.
- Section 4.05(5)(e)4: We would like clarification of the changes to this public notice provision. We assume that it is the effluent limitations, rather than the EPA recommended criteria on which they are based, that would be subject to public participation.
- Section 4.06(1)(e): EPA has inquired as to what DEP's basis was for the statement that water supply uses and shellfishing uses are "higher than national goal uses," and EPA was of the understanding that DEP had agreed to delete the statement in these revisions. Shellfishing is a "national goal use" at section 101(a)(2) of the CWA. Public water supply, while being an important use for states to consider for designation, is not considered to be a "higher" use. The statement that public water supply is higher than national goal uses reinforces the concerns that EPA has expressed about the status of the national goal uses as designated uses for Class A waters.

- Water Body Classification Tables at § 4.06: It appears that the proposed revisions to the tables are limited to reformatting and general house keeping, with the exception of the reclassification of a group of waters from Class B to Class A (see earlier comment concerning Class A and designated uses). We request that DEP provide an explanation of the revisions proposed to these tables so that EPA can confirm that there are no additional concerns.

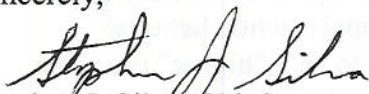
- Table 28, Site-specific Copper Criteria: It is EPA's understanding that, consistent with the criteria that were adopted by the CT DEP and approved by EPA, the site-specific freshwater acute and chronic copper criteria in Table 28 are proposed only for waterbody segments where the instream flow is comprised of 20% or greater treated municipal wastewater at instream low flow design conditions, where MA DEP has documented general water chemistry consistent with the CT waters where the site-specific copper criteria were applied. Please confirm that this is an accurate understanding.

- Table 28, Site-specific Nutrient Criteria: DEP has proposed to adopt site-specific nutrient criteria, for total phosphorus and nitrogen, for numerous waters. It is EPA's understanding that the proposed numbers are targets that have been established in EPA approved TMDLs developed by DEP. We would like to discuss the process for establishing the TMDL targets to ensure that they are appropriate for adoption as site-specific criteria, both for those currently proposed and for those that might be proposed in the future.

- As you are aware, EPA has suggested that DEP include in its WQS an explicit narrative statement that water quantity is to be adequate to ensure the protection of existing and designated uses. Although the State's current regulations are open to being interpreted to ensure that adequate water quantity is protected, an explicit statement would eliminate any question concerning DEP's intent. The language that DEP has proposed in § 4.03(3)(b) related to flow maintenance in FERC licenses is good for those specific projects; however, the inclusion of specific language regarding flow in one context could be interpreted to mean that flow may not be considered in other contexts, such as in § 401 certifications for the construction of new dams not subject to FERC licensing or for § 316(b) intake structures. We would consider such an interpretation as a weakening of the water quality standards compared to the current version. Therefore, we again strongly urge that the standards be amended to explicitly state that water quantity is to be adequate to ensure the protection of existing and designated uses

We look forward to continued cooperation with DEP in developing and finalizing revisions to the Massachusetts surface water quality standards, as a part of our responsibilities under the CWA. Please contact me or Bill Beckwith (617-918-1544) if you have any questions concerning our comments.

Sincerely,


Stephen J. Silva, Chief
Water Quality Branch

cc: Marcia Sherman, MADEP
Vernon Lang, USF&WS
Mary Colligan, NOAAF
Peter Colossi, NOAAF
Gregory Stapleton, EPA SSB

